

AMENDMENTS TO THE CLAIMS

Claims 1-24 (Cancelled)

25. (Previously presented) The method of claim 72, wherein the metal of the foil is selected from the group consisting of titanium, aluminum, stainless steel, nickel, and copper.
26. (Previously presented) The method of claim 72, wherein the grit has a mesh size between 180 and 320.
27. (Currently amended) The method of claim 72, wherein hydrolyzing the grit-blasted surfaces include forming the oxy-hydroxide layer includes applying a caustic solution of sodium hydroxide having a concentration of about 10-50% by weight sodium hydroxide at an elevated temperature that causes the hydrolyzing.
28. (Previously presented) The method of claim 27 wherein the caustic solution of sodium hydroxide has a concentration of about 25% by weight sodium hydroxide.
29. (Previously presented) The method of claim 28, wherein the temperature of the caustic solution is about 150-220°F.
30. (Previously presented) The method of claim 28, wherein the temperature of the caustic solution is about 190°F.
31. (Previously presented) The method of claim 72, wherein the sol-gel coating is about 10-500 nm thick.
32. (Previously presented) The method of claim 72, wherein the sol-gel coating is about 100 nm thick.

33. (Previously presented) The method of claim 72, wherein the sol-gel is a mixture of a zirconium alkoxide, 3-glycidoxy-propyltrimethoxysilane, glacial acetic acid, and a surfactant.
34. (Previously presented) The method of claim 72, wherein the sol-gel is a mixture of zirconium n-propoxide, 3-glycidoxy-propyltrimethoxysilane, glacial acetic acid, and a surfactant.

35-36 (Cancelled)

37. (Currently amended) The method of claim ~~[[72]]~~ 73, wherein the adhesive coating is applied in a dip-coating tank.

38. (Currently amended) The method of claim ~~[[72]]~~ 73, wherein the adhesive coating is applied by spraying.

39. (Currently amended) The method of claim ~~[[72]]~~ 73, wherein the adhesive coating after drying has a thickness of 0.1 to 3.0 mils.

40. (Currently amended) The method of claim ~~[[72]]~~ 73, wherein the adhesive coating after drying has a thickness of 0.75 mils.

41. (Cancelled)

42. (Currently amended) The method of claim ~~[[72]]~~ 73, wherein acetone is used as the solvent for the adhesive.

Claims 43-71 (Cancelled)

72. (Currently amended) A method for preparing surfaces of a metal foil, the method comprising.

performing grit blasting to remove oxide from surfaces of the foil; [[.]]

hydrolyzing the grit-blasted surfaces of the foil to form forming oxy-hydroxide layers on
the grit blasted surfaces; and

forming a sol gel coating on the oxy-hydroxide layers layer, wherein the hydrolyzed
surfaces improve chemical bonding to the sol gel coating. [[; and]]

applying an adhesive coating on the sol gel coating.

73. (New) The method of claim 72, further comprising applying an adhesive coating on the sol gel-coating.

74. (New) The method of claim 73, wherein the grit blasting, hydrolyzing, coating and applying are performed by transporting the foil through a grit blasting line, a sol-gel coating line, and an adhesive coating line, whereby surface preparation of the metal foil is continuous.